

BIOGRAPHICAL SKETCH

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NAME Scott Lovell		POSITION TITLE Director, Protein Structure Laboratory	
eRA COMMONS USER NAME (credential, e.g., agency login)			
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Nebraska at Omaha, Omaha, NE	BS	1994	Chemistry
Purdue University, West Lafayette, IN	PhD	2000	Organic Chemistry
University of Wisconsin, Madison, WI	Postdoctoral	2002	Protein Crystallography

A. Positions and Honors.**Positions and Employment**

- 1997-2000 Staff X-ray Crystallographer, University of Washington, Seattle, WA
 2000-2002 Post doctoral Research Associate and Staff Scientist, University of Wisconsin, Madison, WI
 2002-2003 Crystallographer, Advanced X-ray Analytical Services, COM-CAT Sector 32 Advanced Photon Source, Argonne National Laboratories, Argonne, IL
 2002-2008 Senior Research Scientist/Group Leader, deCODE biostructures, Woodridge, IL
 2008-Present Director (Protein Structure Laboratory), COBRE in Protein Structure and Function, University of Kansas, Lawrence, KS

Other Experience and Professional Memberships

1997-Present American Crystallographic Association (ACA) Member

B. Selected peer-reviewed publications. (Publications selected from 43 peer-reviewed publications)

- Raymond A, Lovell S, Lorimer D, Walchli J, Mixon M, Wallace E, Thompkins K, Archer K, Burgin A, Stewart L. Combined protein construct and synthetic gene engineering for heterologous protein expression and crystallization using Gene Composer." BMC Biotechnology, 2009;9:37. PMID: 19383143
- Gerdtz CJ, Elliott M, Lovell S, Mixon MB, Napuli AJ, Staker BL, Nollert P, Stewart L. The plug-based nanovolume Microcapillary Protein Crystallization System (MPCS). Acta Crystallogr D 2008;64:1116–1122. PMID: PMC2585160
- Klenchin VA, Czyz A, Goryshin IY, Gradman R, Lovell S, Rayment I, Reznikoff WS. Phosphate coordination and movement of DNA in the Tn5 synaptic complex: role of the (R)YREK motif. Nucleic Acids Res 2008;36:5855-5862. PMID: 18790806
- Brines LM, Shearer J, Fender JK, Schweitzer D, Shoner SC, Barnhart D, Kaminsky W, Lovell S, Kovacs JA. Periodic Trends within a Series of Five-Coordinate Thiolate-Ligated $[M^I(S^{Me_2}N_4(tren))]^+$ (M = Mn, Fe, Co, Ni, Cu, Zn) Complexes, Including a Rare Example of a Stable Cull-Thiolate. Inorg Chem 2007;46:9267-9277. PMID: PMC2532082
- Brasemann S, Taylor V, Zhao H, Wang S, Sylvain C, Baluom M, Qu K, Herlaar E, Lau A, Young C, Wong BR, Lovell S, Sun T, Park G, Argade A, Jurcevic S, Pine P, Singh R, Grossbard EB, Payan DG, Masuda ES. R406, an orally available spleen tyrosine kinase inhibitor blocks fc receptor signaling and

- reduces immune complex-mediated inflammation. *J Pharmacol Exp Ther* 2006;319:998-1008. PMID: 16946104
6. Benedict JB, Cohen DE, Lovell S, Rohl AL, Kahr B. What is Syncrystallization? States of the pH Indicator Methyl Red in Crystals of Phthalic Acid. *J Am Chem Soc* 2006;128:5548-5559. PMID: 16620129
 7. Subramony JA, Lovell S, Kaminsky W, Kahr B. Structure of a high temperature phase of potassium dideuteriophosphate (DKDP). *Solid State Commun* 2004;132:827-830.
 8. Dyer DH, Lovell S, Thoden JB, Holden HM, Rayment I, Lan Q. The Structural Determination of an Insect Sterol Carrier Protein-2 with a Ligand Bound C16 Fatty Acid at 1.35Å Resolution. *J Biol Chem* 2003;278:39085-39091. PMID: 12855689
 9. Steiniger-White M, Bhasin A, Lovell S, Rayment I, Reznikoff WS. Evidence for "Unseen" Transposase-DNA Contacts. *J Mol Biol* 2002;322:971-982. PMID: 12367522
 10. Lovell S, Goryshin IY, Reznikoff WR, Rayment I. Two Metal Active Site Binding of a Tn5 Transposase Synaptic Complex. *Nat Struct Biol* 2002;9:278-281. PMID: 11896402
 11. Shearer J, Nehring J, Lovell S, Kaminsky W, Kovacs JA. Modeling the Reactivity of Superoxide Reducing Metalloenzymes with a Nitrogen and Sulfur Coordinated Iron Complex. *Inorg Chem* 2001;40:5483-5484. PMID: 11599942
 12. Bennett BK, Lovell S, Mayer JM. Nitrogen Abstraction from Nitriles by Osmium(IV) Complexes. *J Am Chem Soc* 2001;123:4336-4337. PMID: 11457201
 13. Jackson HL, Shoner SC, Rittenberg D, Cowen JA, Lovell S, Barnhart D, Kovacs JA. Probing the Influence of Local Coordination Environment on the Properties of Fe-Type Nitrile Hydratase Model Complexes. *Inorg Chem* 2001;40:1646-1653. PMID: 11261975
 14. Roth JP, Lovell S, Mayer JM. Intrinsic Barriers for Electron and Hydrogen Atom Transfer Reactions of Biomimetic Iron Complexes. *J Am Chem Soc* 2000;122:5486-5498.
 15. Lovell S, Marquardt B, Kahr B. Crystal Violet's Shoulder. *J Chem Soc Perk T 2* 1999;11:2241-2248.
 16. Lovell S, Subramony P, Kahr B. Poppy Acid: Total Synthesis, Molecular Structure, Crystal Chemistry. *J Am Chem Soc* 1999;121:7020-7025.
 17. Kurimoto M, Subramony P, Gurney RW, Lovell S, Chmielewski J, Kahr B. Kinetic Stabilization of Biopolymers in Single Crystal Hosts: Green Fluorescent Protein in alpha-Lactose Monohydrate. *J Am Chem Soc*, 1999;121:6952-6953.
 18. Subramony AJ, Lovell S, Kahr B. Polymorphism of Potassium Dihydrogen Phosphate. *Chem Mater* 1998;10:2053-2057.
 19. Morimoto BH, Lovell S, Kahr B. Ecstasy: 3,4-Methylenedioxymethamphetamine (MDMA). *Acta Crystallogr D* 1998;54:229-231.
 20. Chmielewski J, Lewis JJ, Lovell S, Zutshi R, Savickas P, Mitchell CA, Subramony JA, Kahr B. Single-Crystal Matrix Isolation of Biopolymers. *J Am Chem Soc* 1997;119:10565-10566.

C. Research Support

Ongoing Research Support

5 P20 RR017708-03 (PI: R. Hanzlik; Co-I: S. Lovell) 05/15/08-03/31/09
NIH 09/30/02-03/31/13
Protein Structure and Function \$1,443,228 (direct); \$582,720 (F&A)\$10,100,000 (total 5 yr)
Core C: Protein Structure Laboratory \$120,798 (direct)

This COBRE is designed to mentor junior faculty as they develop a quality, externally funded research program. The major goal of the Protein Structure Laboratory is to provide assistance to COBRE faculty and other researchers throughout Kansas and the surrounding regions in performing structural studies using X-ray crystallography.

Role: Director